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Dhirendra Pandey

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EXAMINER

WAI, ERIC CHARLES

ART UNIT

PAPER NUMBER

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/675,479	<b>Applicant(s)</b> PANDEY ET AL.	
	<b>Examiner</b> ERIC C. WAI	<b>Art Unit</b> 2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. Claims 1-21 are presented for examination.

#### ***Claim Objections***

2. Claims 12-16 are objected to for potential 101 problem because the claims are directed to a process. However, the process does not include a physical structure and is not tied to another statutory class, and as such the claims are not directed to statutory subject matter. In contrast, a “computer implemented method” is a process claim with defined structural and functional interrelationships and tied to a machine statutory class and therefore directed to statutory subject matter. Appropriate correction or amendment is required.

#### ***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claim 11 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.
5. Claim 11 recites a “system means”; however, it appears that the system would reasonably be interpreted by one of ordinary skill in the art as software per se, failing to be tangibly embodied or include any recited hardware as part of the system. Software is equivalent means of the claimed system.

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6. Even though Applicant has invoked the rebuttable presumption that 35 USC 112, 6th paragraph applies in the claim interpretation of the "means," corresponding "structure" in the disclosure is not automatically and inherently limited to hardware-inclusive embodiments. It is entirely possible for the corresponding disclosed "means" to cover an embodiment of software alone; e.g. a software program, subroutine, a set of instructions.

7. Use of the word "system" does not inherently mean that the claim is directed to a machine. Only if at least one of the claimed elements of the system is a physical part of a device can the system as claimed constitute part of a device or a combination of devices to be a machine within the meaning of 101. In addition the description of Fig 2 beginning at page 9 does not cure the problem since it states the system as other suitable devices. Virtual machines are software systems and can constitute the system. Furthermore, Claim 11 recites, "means for creating a plurality of client-side Object Request Brokers (ORBs) on a client machine". Claim 11 does not claim the client machine itself, only the means for implementing the invention on a client machine. Therefore, the structural equivalents for performing the means would be interpreted by one of ordinary skill in the art as software per se.

### ***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1, 5-6, 10-12, 16-17, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gigliotti et al. (US Pat No. 6,393,458 hereinafter Gigliotti).

10. Regarding claim 1, Gigliotti teaches a system, comprising:

one or more host machines configured to implement a plurality of instances of an application server (Fig 3, Server 44, wherein there are multiple server hosts 58, 60, 62, 64, and 66);

one or more client computer machines each configured to implement one or more clients of the application server (Fig 3, wherein Client 42 can be a single machine), wherein each client on a respective one of the one or more client machines (Fig 3, Client Object 45, 46, 48, 50) is configured to:

create a plurality of client-side Object Request Brokers (ORBs), wherein each client-side ORB is coupled to a server-side ORB of a different one of the plurality of application server instances (col 4, lines 30-31, col 5 lines 53-56, Fig 3, wherein each client instance is connected to a server host through a load balancer using ORB);

select one of the plurality of client-side ORBs on the client machine according to a load balancing scheme in response to a request to access the application server (col 6 lines 37-39, wherein a load balancer, residing on client 42, determines a balanced distribution); and

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access a particular one of the plurality of application server instances via the selected client-side ORB coupled to a server-side ORB of the particular application server instance (col 7 lines 21-24).

11. Gigliotti does not explicitly state the existence of client-side and server-side ORBs. However, it would have been obvious to one of ordinary skill in the art, that ORBs exist at both the client and server in order for the ORB protocol to be used.

12. Regarding claim 5, Gigliotti teaches that each client is further configured to:

select a different one of the plurality of client-side ORBs on the client machine according to the load balancing scheme in response to another request to access the application server (col 6 lines 37-56, wherein the load balancer chooses a different server host to process the request); and

access a different one of the plurality of application server instances using the different client-side ORB coupled to a server-side ORB of the different application server instance (col 7 lines 21-24, wherein the request is directed to the server).

13. Regarding claims 6 and 10-11, they are rejected for the same reasons as claims 1 and 5 above.

14. Regarding claims 12, 16, 17, and 21, they are the method and computer accessible medium claims of claims 1 and 5 above. Therefore, they are rejected for the same reasons as claims 1 and 5 above.

15. Claims 2-4, 7-9, 13-15, and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gigliotti et al. (US Pat No. 6,393,458) in view of Applicant's Admitted Prior Art (AAPA).

16. Regarding claim 2, Gigliotti does not teach that the access of a particular one of the plurality of application server instances via the selected client-side ORB is performed according to RMI-IIOP.

17. AAPA teaches that RMI allows objects on different computers to interact in a distributed network (pg 1 lines 10-13). AAPA also teaches that IIOP is a protocol that allows distributed programs written in different programming languages to communicate over the Internet (pg 2 lines 5-7).

18. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gigliotti to use RMI-IIOP. One would be motivated by the desire to apply the teachings of Gigliotti to distributed computed where the different computing nodes operate on different programming languages as indicated by Gigliotti.

19. Regarding claims 3-4, Gigliotti does not teach that the creation of a plurality of client-side ORBs and said selection of one of the plurality of client-side ORBs according to a load balancing scheme are performed by a Context Factory class, wherein the Context Factory class is a JNDI Factory Class.

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20. AAPA teaches using JNDI to provide naming and directory functionality to applications written in the Java programming language (pg 2 lines 26-27).

21. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Gigliotti by including the use of JNDI. One would be motivated by the desire to access a variety of services (new, emerging, already deployed) in a common way as indicated by AAPA (pg 2 lines 29-30).

22. Regarding claims 7-9, they are rejected for the same reasons as claims 2-4 above.

23. Regarding claims 13-15, and 18-20, they are the method and computer accessible medium claims of claims 2-4 above. Therefore, they are rejected for the same reasons as claims 2-4 above.

### ***Response to Arguments***

24. Applicant's arguments filed 08/25/2008 have been fully considered but they are not persuasive.

25. Regarding Applicant's arguments towards 35 USC 101 rejections, the rejections still stand. Software can be utilized to embody the invention of claim 11. For this reason alone, the claim is directed towards non-statutory subject matter. The claims must



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clearly by limited to hardware only embodiments. Furthermore, software is an equivalent means for realizing the hardware equivalent of the disclosure, which is a proper interpretation of 35 USC 112, 6th paragraph. Lastly, "structural" equivalents can indeed be software per se, i.e. data structures.

26. Applicant argues on pg 3:

“In regard to claim 1, contrary to the Examiner's assertion, the cited art does not teach or suggest one or more client machines each configured to implement one or more clients of the application server, wherein each client on a respective one of the one or more client machines is configured to create a plurality of client-side Object Request Brokers (ORBs) on the client machine, wherein each client-side ORB is coupled to a server-side ORB of a different one of the plurality of application server instances.”

27. Examiner disagrees. In Gigliotti, Client Objects are implemented on a Client machine. In addition, each Client Object is associated with a Load Balancer. As such, a Client Object and its associated Load Balancer can be interpreted to read upon the "client" of Applicant's invention. Although Figure 3 indicates only four client objects, and three load balancer, it is entirely possible for each client object to have its own load balancer (col 6 lines 11-17). Interpreted in this manner, it is inherent that the Client Object and its associated Load Balancer create a plurality of client-side Object Request Brokers (ORBs) on the client machine.

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28. Applicant argues on pg 4:

“Further in regard to claim 1, contrary to the Examiner's assertion, the cited art does not teach or suggest that each client on a respective one of the one or more client machines is" configured to select one of the plurality of client-side ORBs" created by that client on the client machine according to a load balancing scheme in response to a request to access the application server. “

29. Examiner disagrees for the same reasons as above. The Client Object and its Load Balancer are equivalent to Applicant's "client".

30. Applicant argues on pg 4:

“There is no mention whatsoever in Gigliotti of the load balancer selecting one of a plurality of pre-existing client-side ORBs created by the requesting client. While the load balancer in Gigliotti does select a server host to send an event published by a client, Gigliotti does not describe that the load balancer selects among pre-existing client-side ORBs created by that client on the client machine. Even if the load balancer in Gigliotti used an ORB to send the event to the server host, the ORB may be dynamically obtained or created at that time. There is no description in Gigliotti of selecting among pre-existing client-side ORBs. Moreover, there is certainly no suggestion in Gigliotti of selecting among a plurality of pre-existing client-side ORBs created by the particular client that initiated the event (request).”

31. Examiner disagrees. Gigliotti clearly uses ORB to provide a communication means to the hosts (col 7 lines 59-60). Therefore, by choosing a host to route a request,

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the Load Balancer is essentially choosing an ORB through which to route the request.

Gigliotti is clear that the Load Balancer is in constant communication with the hosts (col 6 lines 17-21). Therefore, it is not necessary that the ORB is dynamically obtained or created at the time that the load balancer chooses a server host, as a communication means (i.e. ORB) already exists.

32. Applicant argues on pg 5:

“... even if ORBs existed at both the client and server in Gigliotti, that would not mean that each client in Gigliotti creates a plurality of client-side Object Request Brokers (ORBs) on the client machine, wherein each client-side ORB is coupled to a server-side ORB of a different one of the plurality of application server instances, as required by Applicants' claim 1. Nor would it mean that each client in Gigliotti selects one of the plurality of client-side ORBs created by that client on the client machine according to a load balancing scheme in response to a request to access the application server. “

33. Examiner disagrees. Gigliotti teaches the claimed invention for the reasons argued above.

34. Applicant argues on pg 5:

“In regard to claim 3, contrary to the Examiner's assertion, Gigliotti and AAPA does not teach or suggest that said creation of a plurality of client-side ORBs and said selection of one of the plurality of client-side ORBs according to a load balancing

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scheme are performed by a Context Factory class. The Examiner refers to the admitted existence of JNDI and states that it would have been obvious to modify Gigliotti to include the use of JNDI. However, merely using JNDI in Gigliotti would not result in the specific limitations recited in claim 3. Therefore, the Examiner has failed to state a prima facie rejection. More specifically, employing JNDI in Gigliotti would not mean that the clients in Gigliotti would use a Context Factory class to both create and select among a plurality of client-side ORBs.

35. Examiner disagrees. AAPA is clear the JNDI allows for directory services in distributed object systems such as CORBA (pg 3 lines 6-14). Furthermore, the use of JNDI involves the use of interfaces such as the javax.naming.Context interface (pg 3 lines 16-24). It is also well known in the art to use the InitialContextFactory interface in the javax.naming.spi since an initial context must be created using the InitialContextFactory class (see <http://java.sun.com/j2se/1.3/docs/api/javax/naming/spi/InitialContextFactory.html>).

### ***Conclusion***

36. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

37. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric C. Wai whose telephone number is 571-270-1012. The examiner can normally be reached on Mon-Thurs, 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng - Ai An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Meng-Ai An/  
Supervisory Patent Examiner, Art Unit 2195

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Examiner, Art Unit 2195

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